The Washington Post

Paleontologists Strike Fossil Gold in Colombia

Coal Mining Removes Rock Layers to Reveal Mammoth Snakes, Other Finds

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Washington Post Foreign Service
Wednesday, March 4, 2009; A11

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BOGOTA, Colombia -- Carlos Jaramillo is 39 years old but loves to dig in the dirt -- especially the dry, flaky shale formations of Colombia's Guajira province. "If you talk to a paleontologist," he explained, "you're talking to a kid who never grew up."

For the past five years, Jaramillo and his team of paleontologists have been burrowing ground so rich in fossils that they have made the kinds of discoveries that thrill the scientific world. And they still have years of digging ahead of them at this site in the Cerrejon region of northeastern Colombia, a remote and oven-hot place not unaccustomed to drug traffickers and the occasional rebel column.

Last month, an international group of scientists revealed in the journal Nature that Jaramillo's team had made a startling discovery -- a species of snake larger than a school bus that ruled northern South America 60 million years ago. Evolving after the extinction of the dinosaurs, *Titanoboa cerrejonensis* -- or titanic boa from Cerrejon -- might have been the largest vertebrate living on land at that time, the Paleocene era.

Indeed, it had an average length of 43 feet -- far longer than any of today's pythons or anacondas -- and it weighed 2,500 pounds, more than a small car. Its diet included giant turtles and crocodiles -- Jaramillo's team also discovered the fossilized remains of those creatures under layers and layers of dirt and shale.

In all, Jaramillo and his team have found the remains of 28 snakes that measured between 42 and 49 feet. "What we have is a population of big snakes," said Jaramillo, who is Colombian. "It's not one snake. It's a bunch of them."

Funded by the Smithsonian Institution, Jaramillo's team -- the other members are students working on their master's or doctorate degrees -- has been digging in the most unusual of sites, the enormous, open-pit Cerrejon coal mine. Worked by some of the world's biggest mining multinationals, Cerrejon's 270 square miles are filled with moonlike craters 300 feet deep.

Excavators and earthmovers work without pause, carting off 32 million metric tons of coal a year. They also remove rock and dirt that the paleontologists would never be able to budge -- making it much easier for Jaramillo's team to reach the valuable fossils that he said are opening a window on the first tropical forests that evolved after the dinosaurs disappeared.

"They close a pit, and then they open up a new pit, so we always have possibilities," Jaramillo said. "I think

we'll have 10, 15 years to do excavations. We always find new things."

Arriving for a dig a few months ago, Jaramillo scanned the horizon. For a first-time visitor accompanying him, it appeared to be anything but ground zero for fossils. Huge trucks roared past carrying mounds of coal to be exported to Europe and the United States, and heavy machinery could be heard in the distance, kicking up clouds of dust.

Wearing white work helmets, Jaramillo and two members of his team descended into one of the pits. They carried the tools of their trade -- a light chisel to brush off dirt and a hand lens to examine their discoveries. Perhaps even more important is simply having a sharp eye and a soft touch. "You need to train your eyes and you need to have special skills to do that," Jaramillo explained. "If you don't have the skills, you will come here for a year and never find anything."

The team's work has already turned up giant crocodiles and freshwater turtles that weighed 300 pounds. There are also hundreds of fossils of leaves so perfectly preserved that the paleontologists can easily make out the veins and ridges.

"Oh my God, you can tell the venation very well!" Jaramillo exclaimed, examining a leaf belonging to the *Araceae* plant family. "This is 60 million years old. So it's probably one of the oldest *Araceaes* ever found."

He then showed off the remains of a recently discovered anaconda, and then the fossils of fish and crabs, too. "This was like a big delta; it was a tropical rain forest," he said. That may be hard to fathom today because it rarely rains in Guajira province, which is now mostly home to scrub grass and small trees.

Jaramillo and other scientists think the forest that once thrived in Cerrejon evolved after a giant meteorite hit Mexico's Yucatan Peninsula. The fossils they are recovering are helping to explain how the forest responded to that environmental catastrophe -- and may provide clues on how the modern world will react to, say, global warming.

The team's discoveries are piling up -- 4,000 fossils of plants, fruit, flowers and seeds; 75 turtles, 25 crocodiles, as well as fish, crabs and other creatures. The fossils belong to Colombia but are on loan to the Smithsonian Tropical Research Institute in Panama and at the University of Florida at Gainesville.

Still, Jaramillo searches for more. He said each find is like the chapter of a book. Pieced together, they tell a long and complex story, one that he said is not yet complete.

"The feeling is amazing, because we don't know if here we're going to have a fantastic flower nobody has seen for the last 60 million years, or perhaps there is nothing," he said, as he took a chisel to a mound he had recovered from the shale. "So you just crack the rock open and hope for the best."

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Stay still, will you?

Last week the reptile world was rocked by the news that a 14-metre python had been discovered in Indonesia. Could a snake really be so long? There was only one way to find out - we sent John Aglionby along with a tape measure

"Look, you must understand that a python's length is not constant," explains Darmanto, the owner and handler of Fragrant Flower. Fragrant Flower is the reticulated python found living in a tourism park in central Java which was last week touted as the longest and heaviest snake ever captured - 14.85m and 447kg. "Depending on the weather, on how recently he has eaten and when he last shed his skin, Fragrant can stretch and contract a great deal. A few days ago he stretched himself out halfway round the cage."
This hurried explanation by the man whose large buck teeth, sparkling eyes and animated face lend him more than a passing resemblance to Bugs Bunny is in response to the remarkably unsmelly Fragrant, as he is commonly known, coming up well short when I step into his cage, tape measure in hand.

Indeed, "coming up well short" does not do justice to the disparity between the claimed length and the length I measured. If Fragrant ever extends to 14.85m long he will be the most mind-boggling animal on earth because I measured him at somewhere between 6.5 and 7m.

The imprecise estimate is due to my reluctance to grab hold of his tail and stretch out the beautiful body that is a patchwork of brown, dark yellow and black scales even though Fragrant seems docile enough when his face is hugged, kissed and petted by the unfazed Darmanto.

The snake's unfriendly yellow eyes and the hissing forked tongue that darts in and out of his deceptively small-looking jaws, not to mention my desire to see my wife and four-month-old daughter again and the distance to the nearest competent hospital, mean my courage only extends so far.

Weighing the python is impossible. Judging by a tentative feel of his body while his attention is distracted by children poking their fingers through his cage, I would put it at perhaps 100kg but no more.

"The reason he is not that large now is because he has not eaten for about six weeks and has just shed his skin so his body is quite firm at the moment," explains Darmanto, pushing his index finger hard into the body. "When he's at his full length he's much softer and I can push my finger in much further. And his body is much fatter too, perhaps up to 50cm in diameter."

I poke the body: it seems pretty squidgey and closer to 20 cm across. But locked inside a cage with what is undoubtedly a mammoth and extremely dangerous snake, even if it is not a record-breaker, is neither the time nor the place, I reckon, to tell his protective owner I think he is talking baloney.

So I play along and measure the halfway-round-the-cage stretch instead. This comes to 13.1m.
"Are you sure you saw both ends at once and that perhaps he hadn't just moved in a few

seconds?" I ask.

Mr Darmanto, who says he can get so close to Fragrant's head because he has inherited "inner strength" from his great-great-grandfather, Nasi Ibrahim, is adamant. "Oh, yes. I was cleaning the floor at the other end so I could see him all," he said. "Fragrant then slipped off the rail and into the pool."

Fragrant's age is the next subject I broach. "Probably around 150," is Darmanto's reply. "Although to be honest I don't know this for certain because it was calculated by an expert from Madiun [a small town in east Java] and I just have to take his word for it."

Fragrant Flower's enclosure is the antithesis of what I had expected this alleged world-record obliterator's home to be. Even though he is kept in a crumbling, under-funded government-owned tourism park 2,300ft up a mountain in central Java, I had imagined a setting worthy of his status. Perhaps a smartly uniformed gateman or two holding doors to a newly built, or at least freshly painted, compound. Certainly voluble staff distributing brochures detailing every aspect of the snake's slither to stardom. But initially I can't even see the pen, even when I followed the signs pointing to the home of "Asia's longest snake".

Sandwiched between a creaky roller-coaster and a public swimming pool in the 16-acre park in Curug Sewu, a village 40 miles south of the city of Semarang surrounded by stunning rice terracing and clove tree plantations, Fragrant lives in a rusting 9.5m by 4.5m cage behind unpainted corrugated iron.

Curious gawpers have to pay a scruffy employee 2,500 rupiah (17p) to enter the muddy enclosure, which is also home to a few mangy-looking monkeys chained to bamboo poles and two slothful mongrels that would most appropriately be named Fragrant's Breakfast and Fragrant's Lunch, as three or four canines a month are Fragrant's diet.

Onlookers are ostensibly kept back from the cage by a rickety bamboo fence. But many, wanting a closer inspection, put their faces up to the wire mesh.

Darmanto's hitherto detailed descriptions suddenly became vague when he is asked to recount when and by whom Fragrant's record-breaking length and weight were measured.

"It was a guy called Mr Alek from a laboratory at Gadjah Mada University," he says, referring to one of Indonesia's most prestigious centres of learning. "He did it some months ago. Unfortunately I don't have any photos with me."

So why have Fragrant's record-breaking statistics been kept secret until last week - 19 months after Darmanto says he caught the python in Sumatra, by hypnotising him into a deep sleep. "Don't ask me," he says. "I'm just the owner. That's for the government to decide."

Agus Rifai, the head of the local government tourism office, who has come with me to meet Fragrant, says his department only acquired the snake a couple of weeks ago from elsewhere in Java. "We're still checking the verification," he says.

Once beyond the range of Fragrant Flower's mighty coils and Darmanto's inner power, I decide to find out exactly how much of a wild python chase I have been on. "Essentially, a python's body size is as unflexible as ours is," explains Richard Shine, professor of evolutionary biology at Sydney University and a world python expert. "[Darmanto's story] is exceedingly consistent. These giant pythons always shrink whenever a tape measure turns up."

Shine says that when he conducted the allegedly first and only detailed field study of reticulated pythons, he examined 2,000 snakes in two locations in Sumatra; the females were much bigger than the males but none measured even seven metres long. "The longest male was only four and a half metres, plus 10% for the tail," he says. "He's undoubtedly got a monster snake there but it's almost certainly a female, not a male. It's impossible to tell from the photos."

Shine says that despite having seen the insides of numerous specimens during his research, he has never encountered any reticulated python that eats dogs. "We found monkeys, pigs and even porcupines but no dogs," he says. Most of the pythons were empty though, corroborating Darmanto's claim that Fragrant has not eaten for weeks. None of the pythons Shine has encountered weighed more than 100kg; he described the allegation that Fragrant weighs up to 447kg as "delightful".

Dave Barker, from Texas, who says his claim to have the world's largest python collection of 2,000 snakes has never been contested, is also doubtful about Fragrant's age. "There's no real way to age snakes but by the number of scars and from the proportion of the size of the head to the body [on photographs of Fragrant on the internet], I would guess it's a young big snake, perhaps five to eight years old." He says the longevity record is probably about 50 years for a python kept in a zoo in St Louis, Missouri.

Apart from the obvious explanation that the Fragrant Flower record is completely untrue and made up to boost visitor numbers to the park, which Agus says have risen 60% in the two weeks since the python's arrival, Barker has two theories to account for the evolution of the record claim. They both centre on an allegation by Darmanto that Fragrant is in fact the spiritual ruler of the Kubu, a remote Sumatran tribe that shuns the outside world, and it took a year of negotiations with the elders before he could take it away.

"If this is a spiritual ruler snake then perhaps it really can stretch and change size," Barker says. "The other is that the true giant snake remains in the jungle with the admiring tribe and it took them the year of negotiations to find another retic[ulated python] large enough to give to the government."

False World's Largest Snake

In late December 2003, major and reputable news companies including The Associated Press (AP) of the United States reported on an alleged record-breaking giant snake WITHOUT any fact-checks of the source information. The completely erroneous information was also broadcast repeatedly as fact on a major entertainment animal program on cable television shows including Animal Planet - as recently as March of 2009 in the United States. In short, many so called world-class reputable major news outlets and animal-specialized major network television programs did NOT do what they were supposed to do - examine the validity of the source - before releasing the news. Incidentally, this type of UNPROFESSIONALISM OF NEWS REPORTERS has been seen more and more in main-stream news companies in the United States. Sending a single reporter to the location would clarify this alleged discovery of the century BUT none of the American news outlets saw fit to do so.

Here is the actual report of the alleged world's largest giant snake captured in Indonesia.

JAKARTA, Indonesia - Indonesian villagers claim to have captured a python that is almost 49 feet long and weighs nearly 990 pounds, a local official said. If confirmed, it would be the largest snake ever kept in captivity. (Actual quote from The Associated Press)

More news of the alleged world's largest giant snake captured in Indonesia.

It happened in Jakarta, Indonesia. Local government official Rachmat said the reticulated python measured 48 feet 8 inches and weighed in at 983 pounds. The Indonesian newspaper Republika said the snake, which was caught last year but only recently put on public display, eats three or four dogs a month. It is currently on display in Kendal, in central Java in Indonesia.

Unlike the unprofessional and lazy American news companies, the one in the Britain actually did the right thing. Upon hearing of this major breaking news story, the British newspaper The Guardian sent a reporter out to actually measure the legendary snake. In other words, he undertook a real scientific method and physically measured the animal as any REAL journalist should have done for a story of this stature. He reported that the snake (Fragrant Flower) was only between 21 and 23 feet (6.5 to 7 meters) in length according to his measurement. He also reported the estimated weight of the monster was about 220 pounds (100 kg). The Guardian also shed the light on the matter by actually asking a professional scientist on the subject matter as any REAL news companies should have done. The Guardian quoted Richard Shine, a python expert from Sydney University regarding other claims officially published about the monster snake by the source in Indonesia; these giant pythons always shrink whenever a tape measure turns up.

For more information on this matter (updated April 16, 2007), see following website.

http://www.snopes.com/critters/wild/bigsnake.asp

Takeshi Yamada stated the following. The giant python on display at Giant Snake Show of the Four C Productions was nearly 20 foot, so, the alleged World's largest snake in Indonesia, which is only 10% larger than it, is nothing significant at all. There is a big difference between 49 foot and 22 foot! This story of the discovery of the biggest snake in the century was nothing but a well-fabricated and orchestrated publicity stunt for this tiny Asian nation hoping to gain a moment of international attention and small fame. The people and the government of Indonesia sold the snake story like talkers of Giant Snake sideshows at midways of fair grounds in the turn of the century in the United States. In short, the Indonesian government ran the Giant Snake Sideshow! And almost every news companies in America and around the world bought it like little kids without any critical thinking!

Note: Four C Productions: Four C Productions in Florida is the largest nation-wide traveling sideshow company, which produces 60 to 70 shows annually in the United States. Yamada produced numerous commissioned artworks such as sideshow banners, sideshow showfronts, sideshow gaffs, and sideshow props for the company for years. For more information see Making of the Giant Snake Show: Sideshow Showfront Created by Takeshi Yamada by this author as told by Takeshi Yamada.

FALSE WORLD'S LARGEST SNAKE
THIS IS PAGE: 2

Catch of a lifetime. Gigantic Gaboon viper (Bitis gabonica) in the southeastern rain forest of Cameroon.

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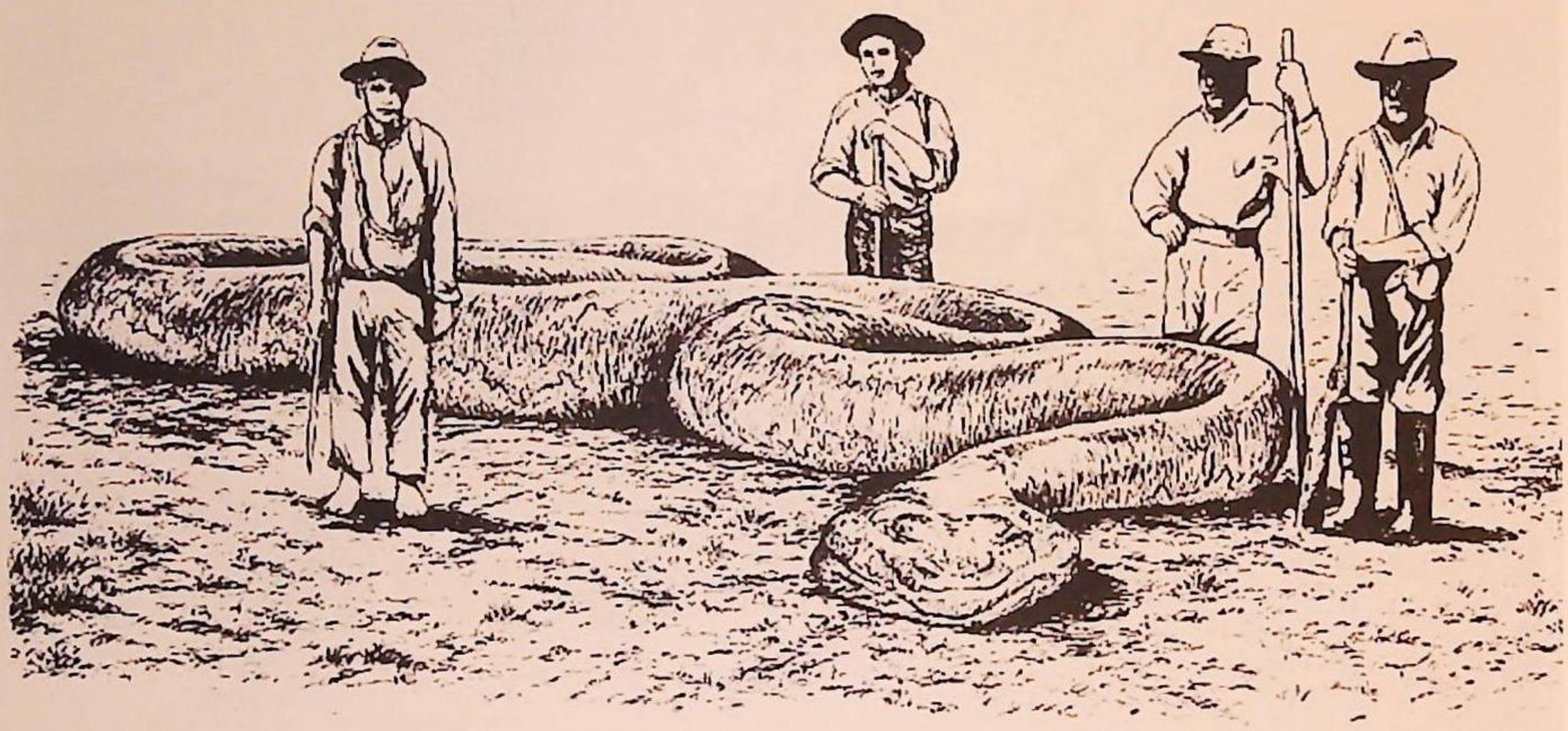
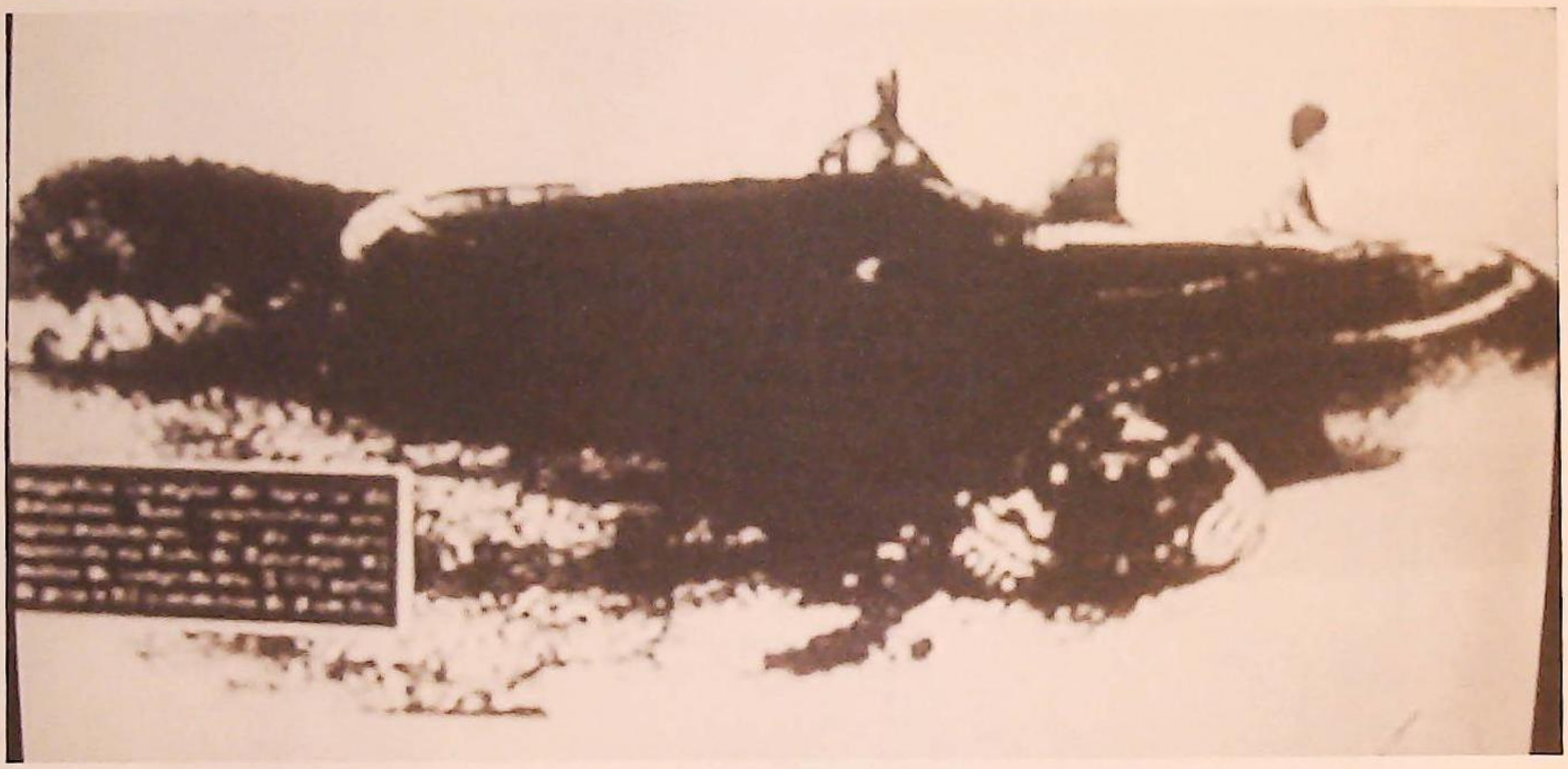
Reconstruction of Famous Percy Fawcett Photograph.

Drawing showing Percy Fawcett and his expedition with the 62-foot giant anaconda.



Fawcett was regaled with stories of giant anacondas said to reach 60 ft. or more.
(Based partly on a photograph in Dario de Pernambuco, *Jan 24th 1948).*

Percy Fawcett Giant Anaconda Photo published in either a book or a magazine.



Percy Fawcett Giant Anaconda Photo